

Table of Contents

Profile of the California Integrated Waste Management Board.....	viii
Acknowledgments.....	ix
Introduction to <i>Closing the Loop</i>	I-1
Components of Lessons and Page Layout in <i>Closing the Loop</i>	I-3
Tips for Implementing Projects.....	I-9

K–3 Module

Introduction to the K–3 Module of <i>Closing the Loop</i>	I-11
---	------

Unit 1: Conserving Natural Resources

Overview.....	1
Lesson 1: What Are Natural Resources?.....	5
Lesson 2: People Use Natural Resources.....	13
Lesson 3: Landfill in a Jug	25
Lesson 4: There Is No “Away”	37
Lesson 5: Treasures of the Earth—A Play.....	43

Unit 2: Reducing, Reusing, and Recycling Classroom Waste

Overview.....	49
Lesson 1: Reducing the Amount of Plastic That Goes to a Landfill	53
Lesson 2: What Do I Do with It Now?	63
Lesson 3: Classroom Exchange of Unwanted Items	75
Lesson 4: Making Recycled Paper by Hand	81
Lesson 5: Sounds from Reused Materials and Songs About Reusing and Recycling.....	93

Unit 3: Vermicomposting

Overview.....	101
Recommended Time Line and Activities for Unit 3: Vermicomposting.....	105
Preparing the Decomposition Experiment	106
Lesson 1: The Basics of Vermicomposting	107
Lesson 2: Getting to Know Red Worms.....	121
Lesson 3: Cycles in Nature and Red Worm Development.....	135
Lesson 4: The Effects Worms Have on Soil	143
Lesson 5: Using Compost and Promoting Vermicomposting	149

Unit 4: Proper Disposal of Waste

Overview.....	157
Lesson 1: Litter on the School Grounds.....	161
Lesson 2: Litter, Wildlife, and Decomposition.....	175
Lesson 3: Litter Relay	183
Lesson 4: Packaging Can Become Litter.....	189
Lesson 5: Antilitter Promotional Campaign	197

Unit 5: Proper Management of Household Hazardous Waste

Overview.....	.201
Lesson 1: Poisons That Look Like Food .....	.203
Lesson 2: Safety's House.....	.211
Lesson 3: Proper Disposal of Household Hazardous Waste .....	.223

4–6 Module

Introduction to the 4–6 Module of <i>Closing the Loop</i>241
---	------

Unit 1: Managing and Conserving Natural Resources

Overview.....	.243
Lesson 1: Defining Natural Resources.....	.247
Lesson 2: Away to the Landfill.....	.259
Lesson 3: Keeping Items Cycled.....	.273
Lesson 4: Renewable and Nonrenewable Natural Resources.....	.293
Lesson 5: Ways to Conserve Natural Resources .....	.305

Unit 2: Reducing, Reusing, and Recycling

Overview.....	.309
Lesson 1: Sources of Energy .....	.315
Lesson 2: Performing a Class Audit of Waste.....	.321
Lesson 3: Model Community Relay.....	.333
Lesson 4: Packaging: What a Waste! .....	.341
Lesson 5: Why Do I Buy It? .....	.359
Lesson 6: Reusing Trash.....	.369
Lesson 7: Plastic Polymers.....	.383
Lesson 8: Separation Mania.....	.399
Lesson 9: Buying Recycled Products .....	.411
Lesson 10: What Are We Reusing and Recycling at School? .....	.421
Lesson 11: A Class or School Game and Reuse Day .....	.431
Lesson 12: Sharing What We Know About Reducing, Reusing, and Recycling.....	.439

Unit 3: Composting

Overview.....	.447
Lesson 1: The Nutrient Cycle and Other Cycles .....	.451
Lesson 2: Scavengers and Decomposers .....	.459
Lesson 3: What Decomposes? .....	.475
Lesson 4: What Is Composting and Why Is It Important?.....	.481
Lesson 5: Promo and Play on Composting .....	.493

Unit 4: Proper Management of Household Hazardous Waste

Overview.....	.503
Lesson 1: Hazardous Products in Your House .....	.509
Lesson 2: No Household Hazardous Wastes in a Landfill .....	.523

Lesson 3: The Consequences of Improper Management of Household Hazardous Waste.....	539
Lesson 4: Proper Management of Household Hazardous Waste	553
Lesson 5: Promoting Proper Management of Household Hazardous Waste	565
Appendices	
Appendix A—Instructional Materials	A-1
Appendix B—Overview of Integrated Waste Management	B-1
B-I History of Waste Management.....	B-1
B-II Waste Prevention	B-6
B-III Recycling.....	B-9
B-IV Landfill Issues	B-11
B-V Incineration: Waste-to-Energy Facilities.....	B-12
B-VI Household Hazardous Wastes	B-15
Appendix C—Overview of Specific Materials	C-1
C-I Aluminum.....	C-1
C-II Aseptics	C-2
C-III Ferrous Metals	C-3
C-IV Glass.....	C-4
C-V Motor Oil	C-5
C-VI Organic Materials.....	C-6
C-VII Paper.....	C-8
C-VIII Plastics.....	C-10
C-IX Tires	C-13
Appendix D—Setting Up and Maintaining Composting Systems	D-1
D-I Constructing Wire Mesh Composting Bins	D-1
D-II Maintaining a Vermicomposting System.....	D-3
D-III Assembling Worm Bins.....	D-6
D-IV Worm and Worm Bin Suppliers in California	D-9
Appendix E— <i>Closing the Loop</i> Vocabulary.....	E-1
Appendix F—Websites	F-1
F-I Awards and Activities Websites	F-1
F-II Composting Websites	F-3
F-III Landfill Websites.....	F-4
F-IV Natural Resources Websites.....	F-5
F-V Recycling Websites.....	F-6
F-VI Vermicomposting Websites	F-9
Appendix G—Your Local Area Template	G-1